

O I P E  
MAR 14 2005  
TRADEMARK OFFICE 60125

TI-32157  
10/003,570

REPLACEMENT  
SHEET

1/4

1112

DISPLAY

100

EXTERNAL  
MEMORY

104

LCD CONTROL  
AND FRAME

110

102

103

L2 CACHE

LEVEL 3 TRAFFIC

S-RAM

LEVEL 2 TRAFFIC

106

PERIPHERALS

114c

D-C

MPU

I-C

114b

HW

106

DATA

DSP

114a

PERIPHERALS

FIG. 1

MULTIPROCESSOR SYSTEM

LEVEL 3  
ACCESS

111

LEVEL 2  
ACCESS

APPLICATION  
SPECIFIC GATES

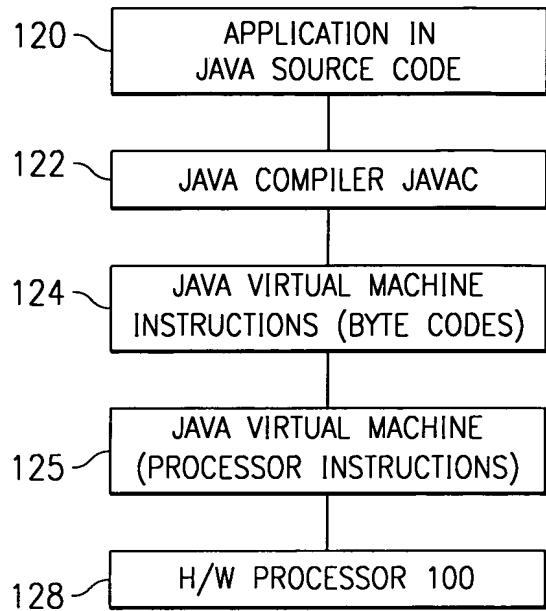


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*FIG. 2*



*FIG. 5*

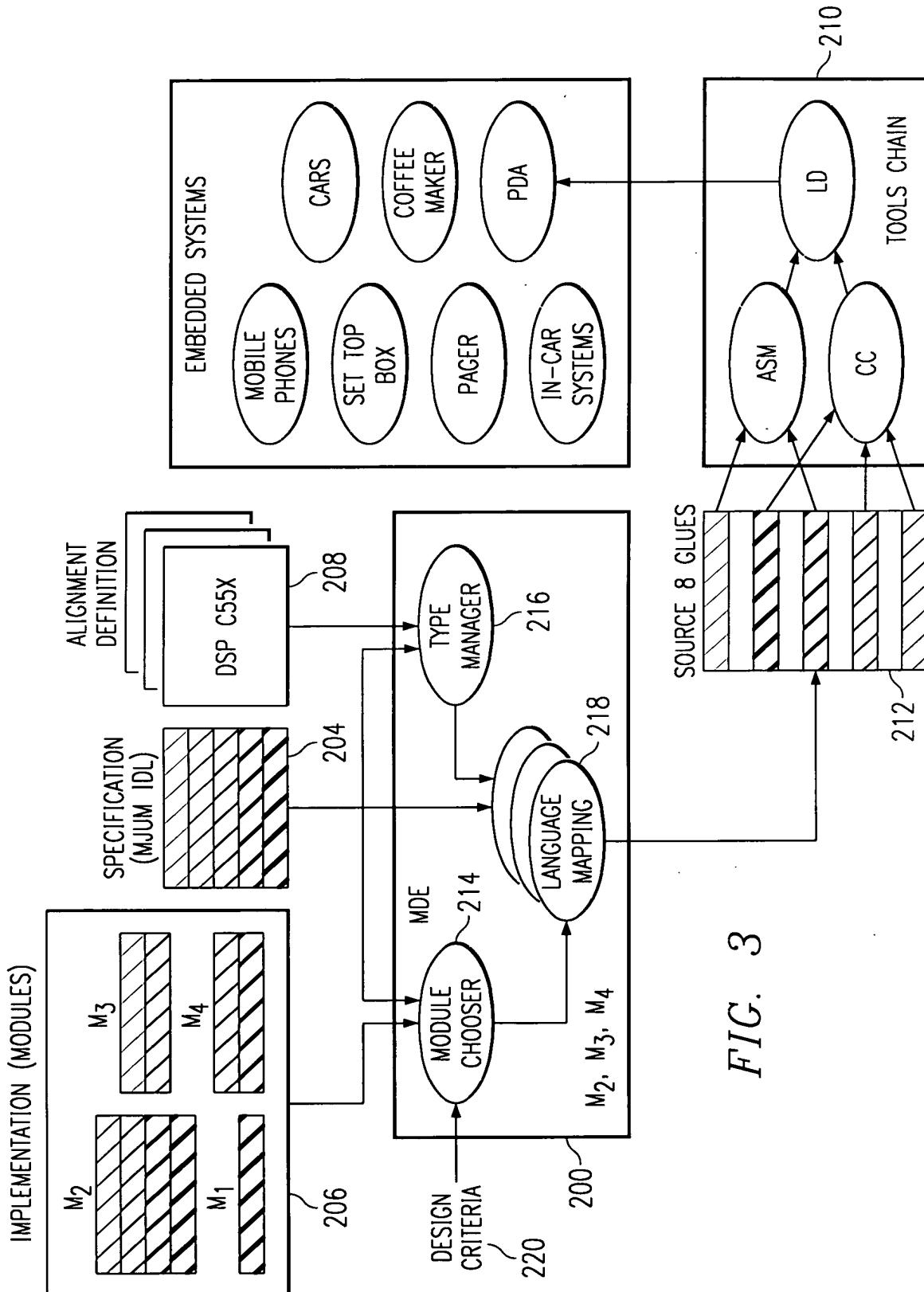
| INTEL PENTIUM II            |               |       |        | TI DSP C55X                 |                 |       |        |
|-----------------------------|---------------|-------|--------|-----------------------------|-----------------|-------|--------|
|                             | LANGUAGE      | CYCLE | MEMORY |                             | LANGUAGE        | CYCLE | MEMORY |
| SWITCH<br>THREADED<br>RATIO | ANSIC<br>GNUC | 162   | 20     | SWITCH<br>THREADED<br>RATIO | ANSIC<br>C/ANSI | 294   | 40     |
|                             |               | 132   | 80     |                             |                 | 183   | 80     |
|                             |               | 19%   | 400%   | SWITCH<br>SWITCH-2<br>RATIO | ANSIC<br>ANSIC  | 62%   | 200%   |
|                             |               |       |        |                             |                 | 294   | 40     |
|                             |               |       |        |                             |                 | 622   | 20     |
|                             |               |       |        |                             |                 | 211%  | 50%    |



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## FIG. 4

| MODULE        | DESCRIPTION  |
|---------------|--|
| ARITHMETIC    |  |
| INTEGER       | REPRESENTATION, OPERATIONS AND CONVERSION OF JAVA INT    |
| LONG          | REPRESENTATION, OPERATIONS AND CONVERSION OF JAVA LONG   |
| FLOAT         | REPRESENTATION, OPERATIONS AND CONVERSION OF JAVA FLOAT  |
| DOUBLE        | REPRESENTATION, OPERATIONS AND CONVERSION OF JAVA DOUBLE |
| JAVA FRAME    |  |
| LOCAL         | LOCAL VARIABLES MANAGEMENT AND ACCESS                    |
| STACK         | STACK MANAGEMENT AND ACCESS                              |
| CONTROL FLOW  |  |
| MOTOR         | INTERPRETATION ENGINE                                    |
| BRANCH        | BRANCHING AND SUBROUTINE                                 |
| EXCEPTION     | EXCEPTION MANAGEMENT AND BRANCHING                       |
| OBJECT        |  |
| OBJECT        | REPRESENTATION AND OPERATIONS ON OBJECT AND REFERENCE    |
| FIELD         | REPRESENTATION OF 'SMALL' TYPE AND FIELD ACCESS          |
| ARRAY         | REPRESENTATION AND OPERATIONS ON ARRAY AND ELEMENT       |
| METHOD        | METHOD INVOCATION AND PARAMETERS PASSING                 |
| INTERFACE     | INTERFACE MANAGEMENT                                     |
| STRING        | INTERNAL STRING AND JAVA STRING REPRESENTATION           |
| CLASS         |  |
| CIREPOS       | CLASS REPOSITORY   |
| LOAD          | CLASS LOADER MANAGER                                     |
| MISCELLANEOUS |  |
| JNI           | JAVA NATIVE INTERFACE SUPPORT                            |
| THREAD        | THREAD AND MONITOR SUPPORT                               |